

Applicant hereby affirms the election to prosecute Group I, consisting of claims 1 and 2 in this application.

The Office Action has been carefully considered. The application now is believed to be in condition for allowance, in view of the above amendments and for the following reasons.

Claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Develter, U.S. Patent No. 3,630,226. Reconsideration of this rejection is hereby solicited.

Develter '226 discloses an ANAEROBIC STORAGE APPARATUS. This patent also includes an incidental disclosure of the use of the ANAEROBIC STORAGE APPARATUS for the storage and treatment of olives.

It is explained in the reference that, in the past, certain fruits and vegetables were treated by a pickling process by placing the product in large open vats filled with sodium chloride (salt) solution or brine. This prior practice generally resulted in satisfactory food products. However, the need for a minimum salinity of the brine can impart excessive and undesirable saltiness to the product. However, a more serious shortcoming of the prior process was that the brine was biodegradable and would pollute the fresh water bodies and the surrounding soil and, thus, retard or kill plant and animal life.

The Develter '226 invention is an airtight container that would permit gases to escape but prevent fresh air from entering. The gases that escaped were replenished from a separate reservoir 30 located on the top of the container. The airtight container was filled with a biodegradable solution into which the food to be processed was placed.

The biodegradable solution was prepared by dissolving an edible, biodegradable organic salt in water so that the solution has a total salt concentration of between about 0.3 percent and about 0.35 percent. Develter '226 suggests a biodegradable organic salt, such as the salt of benzoic or sorbic acid (2,4 hexadienoic acid potassium salt or sodium benzoic salt).

In this preparation of the biodegradable solution, a second ingredient is further added to the solution so that it is present at a rate of about 1.3 to about 1.7 percent by weight to provide the solution with a pH of between 3.5 and 4.2. Develter '226

suggests that the second ingredient should be a biodegradable, edible organic acid, such as lactic acid (alpha hydroxy proprionic acid) or acetic acid (vinegar).

Thus, the biodegradable solution of Develter '226 includes two ingredients, the first having a presence in the solution of about 0.3 to 0.35 percent and the second having a presence in the solution of about 1.3 to 1.7 percent. The solution has a pH of between 3.5 and 4.2.

Thus, Develter '226 discloses a conventional use of potassium sorbate as a food preservative. On page 1 of Applicant's specification, it is fully acknowledged that potassium sorbate in the range of 0.05% to 0.3% is used as a food preservative in many foods. It is also acknowledged in this portion of Applicant's specification that the effectiveness of all food preservatives is highly dependent upon the pH of the preservative and the optimum effectiveness of potassium sorbate as a food preservative when it is used below pH 6.0.

Claim 1 of this application, from which claim 2 depends, is directed to an aqueous solution that prevents the formation of rust, corrosion and scale on metal surfaces. Since Applicant is not claiming a food preservative, Develter '226 is not relevant. Potassium sorbate has been used as a food preservative for a long period of time. During this time period, rust, corrosion and scale have been serious problems. However, until Applicant made the discovery disclosed and claimed in this application, it was not recognized that an aqueous solution having a concentration of potassium sorbate within a certain range and a pH within a certain range was effective to prevent the formation of rust, corrosion and scale on metal surfaces. The failure of anyone to recognize the invention set forth in Applicant's claims during the long use of potassium sorbate as a food preservative is proof in and of itself that Applicant's invention was not obvious to one having ordinary skill in the art. Applicant's invention involves an unexpected, surprising and unusual result that is not shown in the prior art and was not obvious to one having ordinary skill in the art. This invention clearly meets the patentability requirements set forth in 35 U.S.C. §103(a).

Furthermore, Develter '226 discloses an aqueous solution having two ingredients, not just potassium sorbate. The second ingredient, such as lactic acid, is present in a greater concentration, 1.3 to 1.7 percent than the potassium sorbate which is

present at a concentration of 0.3 to 0.35 percent. Thus, the aqueous solution disclosed in Develter '226 is not the same solution as recited in Applicant's claims. Develter '226 states that his solution has a pH of between 3.5 and 4.2. In claim 1, it is recited that Applicant's aqueous solution has a pH of 4.5 or higher.

Still further, claim 2 that depends from claim 1 recites that the concentration of potassium sorbate is in the range of 0.30% to 1.75%. This claimed range greatly exceeds the range disclosed in Develter '226 of 0.30% to 0.35%.

For all of the above stated reasons, it is felt that claims 1 and 2 are not obvious over the disclosure of Develter '226.

Claims 1 and 2 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Merciadet et al., U.S. Patent No. 5,354,902. Reconsideration of this rejection is hereby solicited.

The Merciadet et al. patent is directed to a STABILIZED SORBIC ACID OR SALT THEREOF. The invention relates to sorbic acid or salt thereof such as potassium sorbate to which has been added a low concentration of manganous (Mn^{++}) ion as a stabilizer. This patent states that, although sorbic acid and its salts are quite stable when dry, they are susceptible to oxidation in aqueous solution, and this oxidation produces products such as ketones and aldehydes, which can cause development of undesired flavors or odors, and polymers of the aldehydes can cause development of undesired color.

Merciadet et al. '902 provides three examples to demonstrate its invention. In **Example 1**, the potassium sorbate (plus Mn^{++}) was present in a concentration of 0.110 percent.

In **Example 2**, potassium sorbate samples were dissolved in equal weight portions of deionized water to produce 50% aqueous solutions to which manganous sulfate monohydrate was added in various proportions. These solutions were then freeze-dried, after which these samples, containing various concentrations of Mn^{++} were dissolved in acidified, buffered aqueous solutions of a solution in which the potassium sorbate (plus Mn^{++}) had a concentration of 0.110 percent.

In **Example 3**, an alcohol-free, fluoride dental mouthwash was prepared that included potassium sorbate at a concentration of 0.25 percent.

The results of each of the above three examples supported the inventors' claims that potassium sorbate does oxidize and this oxidation can be inhibited or retarded by adding low concentrations of manganous (Mn^{++}) as a stabilizer. However, the highest concentration of potassium sorbate in any of the examples was 0.25%. Furthermore, there is no mention whatsoever in this reference that an aqueous solution containing potassium sorbate could be used for the prevention of rust, corrosion and scale on metal surfaces.

In the Office Action, page 4, the Examiner mentions a passage in Merciadet et al. '902 where it is stated that potassium sorbate solutions are disclosed as being from 0.005 to about 5% by weight. Although the Examiner states that this statement is in column 1, that appears to be a typo and should have been column 2. Furthermore, Applicant is of the opinion that the Examiner has misinterpreted the statement that appears in column 3, lines 4-13. In the Office Action, the Examiner states the following:

Merciadet et al. '902 discloses stabilized sorbic acid and salts thereof. Merciadet et al. '902 discloses aqueous solutions of sorbic acids and salts such as potassium sorbate. The amounts of potassium sorbate in solution are disclosed as being from 0.005 to about 5% by weight (col. 1, lines 4-13).

In the examples included in Merciadet et al. '902, the highest concentration of potassium sorbate is 0.25 percent. Merciadet et al. '902 does not, in fact, disclose a solution having a concentration of potassium sorbate of 5%. The statement appearing in column 3, lines 4-13 is obviously a background statement of current aqueous solutions that included potassium sorbate, but does not identify how such solutions are used. It should be noted that Applicant has acknowledged, on page 1, lines 22-24 that some food products are dipped or sprayed with a potassium sorbate solution that has a concentration of 5-10%. However, the concentration of the preservative in these final products fall within the above range, the above range being 0.05% to 0.3%. As a practical matter, an aqueous solution

containing a 5% concentration of potassium sorbate would never be used for food products because the taste is unpalatable and completely unacceptable.

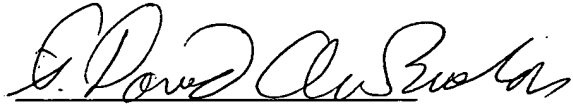
Furthermore, claim 2, that depends from claim 1, recites that the concentration of potassium sorbate is in the range of 0.30% to 1.75%. This claimed range greatly exceeds the range disclosed in the three examples of Merciadetz et al. '902, and is clearly a limitation that is not disclosed in the applied prior art.

Claim 1 of this application, from which claim 2 depends, is directed to an aqueous solution that prevents the formation of rust, corrosion and scale on metal surfaces. Since Applicant is not claiming a food preservative, Merciadetz et al. '902 is not relevant. Potassium sorbate has been used as a food preservative for a long period of time. During this time period, rust, corrosion and scale have been serious problems. However, until Applicant made the discovery disclosed and claimed in this application, it was not recognized that an aqueous solution having a concentration of potassium sorbate within a certain range and a pH within a certain range was effective to prevent the formation of rust, corrosion and scale on metal surfaces. The failure of anyone to recognize the invention set forth in Applicant's claims during the long use of potassium sorbate as a food preservative is proof in and of itself that Applicant's invention was not obvious to one having ordinary skill in the art. Applicant's invention involves an unexpected, surprising and unusual result that is not shown in the prior art and was not obvious to one having ordinary skill in the art. This invention clearly meets the patentability requirements set forth in 35 U.S.C. §103(a).

For all of the above stated reasons, it is felt that claims 1 and 2 are not obvious over the disclosure of Merciadetz et al.

Thus, Applicant maintains that the invention set forth in the claims 1 and 2 is not disclosed or taught in the prior art references. The Applicant, therefore, requests reconsideration and allowance of this application.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "F. David AuBuchon", written over a horizontal line.

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